



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,515	02/07/2001	Christopher J. Edge	10256US01	3184

7590 04/19/2005

STEVEN J. SHUMAKER
SHUMAKER & SIEFFERT, P.A.
8425 SEASONS PARKWAY
SUITE 105
ST. PAUL, MN 55125

EXAMINER

AMINI, JAVID A

ART UNIT	PAPER NUMBER
----------	--------------

2672

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/778,515

Applicant(s)

EDGE ET AL.

Examiner

Javid A Amini

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,11-17,19,21-26,28,33,35-37 and 39-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Jan. 10, 2005 has been entered.

- Examiner's comment about the remarks dated 1/10/2005 on page 17 under Double Patenting. Applicant on same page discloses strongly the red-blue shifted gray elements are completely different from the gray background of the present Application. (The Examiner's comparison disclosed by adjusting the red-blue shift gray level, one may obtain gray level of 25-40% of the claim's limitation). Another words the gray background of the present Applicant does not contain any colors such as red, blue or combination of mentioned colors. In this case Examiner relies on Applicant's information and the Double Patenting is withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2, 4-9, 11-17, 19, 21-26, 28, 33, 35-37 and 39-48 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled

Art Unit: 2672

in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant claims in claims 1, 15, 25, 41 and 45 that the invention acquires the information about a gamma for the display device, then simultaneously displayed gray elements. It seems the Applicant's invention claims just one type of display device, but a person skill in the art knows, there are different type of displays with different size (from a PDA to a oversize display), resolutions (from low to high), format (NTSC or PAL or etc.), age of display (10 years to brand new), and finally different levels of human eye visions.

Questions:

- How many gray elements, does Applicant generate?
- Is the method claiming, a computer program file? If it is, how does it distinguish between different display devices?
- Is gamma correction based on multi formats (NTSC, VGA, PAL, SECAM and etc)?
- Does the invention involve a combination of hardware and software?
- Does Applicant rely on human eye vision to measure the gamma correction or a hardware device?

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2, 4-9, 11-17, 19, 21-26, 28, 33, 35-37 and 39-48 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant in claim 1, at first line claims “generating gray elements and a single dithered gray background ... “. A person skill in the art requires obtaining the following answers in order to comprehend the claim language:

- How many gray elements, does Applicant generate?
- Is the method claiming, a computer program file? If it is, how does it distinguish between different display devices?
- How does it work with other user’s installed graphical applications?
- What are the recommended input value ranges for gray elements and gray background?
- Examiner assumes the computer program is an executable file, does the file execute in the target display device or executes on a remote device then transfers to the targeted device?
- Are green levels similar to gray elements?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2672

Claims 1, 2, 4-9, 11-17, 19, 21-26, 28-33, 35-37 and 39-48 are rejected under 35 U.S.C.

103(a) as being unpatentable over “Display gamma estimation applet” by Hans Brettel, copyright 1999, said applet can be located at <http://www.tsi.enst.fr/~brettel/TESTS/Gamma/Gamma.html> (referenced hereinafter as “Brettel”) and further in view of Yoo US 6,185,005 B1.

1. As to claims 1, 2, 15-17, 25, 26 and 41-47 Brettel discloses a process for calibrating/estimating the gamma for a monitor, comprising: generating gray elements (i.e., the center square of gray) and a gray background on a display device, the gray background representing a gray level of approximately 25-40% (See the Figure of the Brettel applet. This applet allows for the adjusting of both the center square and the background. Further, the gray values of these items can be varied between 0-254, which, on a percentage scale is 0-100%. For example, a gray value of 84 for the background is equivalent to approximately 33% gray level. The applet works for background levels from approximately 2 to 190, which correspond, to approximately .01% to 75% background gray level range. Thus, the applet includes the claimed range of 25-40%); and estimating a gamma for the display device based on user selection of one of the gray elements that appears to most closely blend with the dithered gray background (the applet estimates a gamma value (See the line “gamma=2.14” directly above the sliders. The values displayed by the applet for the gamma is based upon what value the user selects for the gray element (center square) that most closely matches the background gray level.). As to the limitation of “dithered” gray background level, while the reference does not explicitly state that the background gray level is “dithered”, however, the use of dithered background is obvious. See Yoo in col. 1, lines 19-21 teaches one standard method of converting gray or hue concentration level image data into binary level pixel image data is through the use of dithering or halftoning

Art Unit: 2672

processes. Examiner's comment: the reference Yoo uses the terms halftoning process equivalent to dithering process. Yoo in col. 3 lines 11-14 teaches that an object of the Yoo's invention is to provide an improved and system for halftoning (dithering) that allows automatic gamma correction without requiring additional software. Yoo in fig. 3 illustrates in step 3-1 an input value for a selected macro halftone cell is obtained in a conventional manner from existing image data. This input value is tested, in operation 3-2, to determine a pixel rank threshold value. In accordance with preferred embodiments of the invention, in which gamma correction is built into the ranking of pixels in the macro halftone screen, the threshold value (Examiner's interpretation: the threshold value of Yoo is equivalent to Applicant's single dithered gray background value) can be linearly proportional to the input value (Examiner's interpretation: the input value of Yoo's invention is equivalent to the Applicant's gray elements, see also fig. 1 in Yoo illustrates the input value generates the gray elements in Y axis, which simultaneously displays the appropriate gamma value (gamma correction) according to the input value and gray elements). Then, in operation 3-3, the rank of each pixel in the halftone screen is compared with the given threshold value to identify all pixels having a rank above the threshold value. Finally, in operation 3-4, output data will be generated to darken those pixels having rank values above the threshold value. The resulting pixel generation data produced by operation 3-4 is then utilized in a conventional manner to control the outputting, e.g., printing, and operation.

Applicant in independent claims 15,41 and 45 claims a web server and web browser (Examiner's interpretation: meaning the Applicant's invention is a computer program file that can be reside on a computer such as stand alone, workstation, server and etc.). It is obvious to a person skill in the art to transfer/send/ftp/download the computer program file to any network or a remote

Art Unit: 2672

computer that has a proper permission the person skill in the art. For example: an email file, Word document as an attachment, a picture file or download a file from a server. Examiner's comment: the main invention is about the computer program file that Applicant seems teaching away from the claim invention. For example: a person skill in the art would like to know how does the computer program file distinguish between different display devices over a network or a remote computer.

It would have been obvious to use the teachings of Brettel into Yoo, in order to incorporate the display graphics in Brettel that shows a background and a center square that can be matched using range of gray elements at the bottom of the figure to adjust the right gamma value.

Reminder: the gray background in Brettel is adjustable also can be a fixed value. Since the references are directed to the same process of setting a gamma correction using an operator input and because the ability of setting the gamma using the component (RGB) colors allows for a more accurate and distinct gamma correction since the gamma can be adjusted individually for each component rather than a single global gamma adjustment. Yoo in col. 6 lines 46-64 teaches in a color system according to the invention, each pixel selector 47 could store a separately derived pixel rank pattern, depending on the gamma correction requirements for each color. Each pixel selector 47 storing the pattern of rank values for a macro halftone cell could be a memory, such as a ROM, a PROM, etc. The rank value for each pixel would be stored at a given memory location. Threshold data representing a respective color at one image point would be inputted to the memory. Such an input signal could have, for example, any one of 256 different values, each value corresponding to a respective gray scale, or hue intensity, level. The location of each pixel having a rank, which is above a threshold determined by the value of the threshold

Art Unit: 2672

signal, would then be read out to a suitable control system to identify those pixels, which should be provided with a black dot. This information would then be applied to control the application of dots to the medium on which an image is to be reproduced.

2. With regard to claims 5, 29, Yoo in col. 6 lines 46-64 teaches in a color system according to the invention, each pixel selector 47 could store a separately derived pixel rank pattern, depending on the gamma correction requirements for each color. Each pixel selector 47 storing the pattern of rank values for a macro halftone cell could be a memory, such as a ROM, a PROM, etc. The rank value for each pixel would be stored at a given memory location.

Threshold data representing a respective color at one image point would be inputted to the memory. Such an input signal could have, for example, any one of 256 different values, each value corresponding to a respective gray scale, or hue intensity, level. The location of each pixel having a rank, which is above a threshold determined by the value of the threshold signal, would then be read out to a suitable control system to identify those pixels, which should be provided with a black dot. This information would then be applied to control the application of dots to the medium on which an image is to be reproduced.

3. With regard to claims 6, 13-14, 30, 37, 39 and 40 it is obvious to a person skill in the art to transmit information representing the estimated gamma to a remote server or any other computer. Modifying the color image at the remote server based on the information is similar to claim 1's language that is the display device can be a display server, or display remote computer.

4. As to claims 7, 22 and 31 Brettel on page 1, discloses for estimating the gamma includes: selecting one of a first plurality of gray elements displayed by the display device that appears to most closely blend with the dithered gray background; estimating a coarse gamma for the display

Art Unit: 2672

device based on the selected one of the first plurality of gray elements; selecting one of a second plurality of gray elements displayed by the display device that appears to most closely blend with the dithered gray background, wherein the second plurality of gray elements includes the selected one of the first plurality of gray elements; and estimating a fine gamma for the display device based on the selected one of the second plurality of gray elements, wherein the estimated fine gamma is the estimated gamma.

5. As to claims 8, 23 and 32 the limitations in the claim is obvious because Yoo in fig. 1 illustrates plurality of gray elements with different intensity, see range of values from white element to dark element.

6. As to claims 12, 24, 36, Brettel on page 1, illustrates for estimating both the blackpoint and the gray balance of the display device; and characterizing the colorimetric response of the display device based on the estimated gamma, blackpoint, and gray balance.

Claims 4, 24 and 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Brettel, Yoo, and further in view of Robert W. Berger, copyright 1997 (referenced hereinafter as "Berger").

7. With regard to claims 4, 24 and 28 Berger on page 3, discloses that color can be measured in a device, and a colorimeter is a device that evaluates and identifies colors in terms of a standard set of synthesized colors. To one of ordinary skill in the art it would have been obvious to use the teachings of Berger in the combination of Yoo and Brettel since all three of the references are directed to the same process of setting a gamma level using an operator input and because the ability of setting the gamma using the component (RGB) colors allows for a

Art Unit: 2672

more accurate and distinct gamma correction since the gamma can be adjusted individually for each component rather than a single global gamma adjustment. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Berger into Brettel and Yoo in order to show the user to change the gamma from 1.4 to 2.2 over web average gamma that is 2.5.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini


JEFFERY AMINI
PRIMARY EXAMINER